International
journal for
Parasitology

Volume 17 1987

List of Contents, Author and Key Word Index

Pergamon Press Oxford New York Beijing Frankfurt
Sao Paulo Sydney Tokyo Toronto

VOL. 17 INTERNATIONAL JOURNAL FOR PARASITOLOGY 1987

Sponsored by the Australian Society for Parasitology
Published in eight issues per annum by Pergamon Journals Ltd. for the **Australian Society for Parasitology**

Editor-in-Chief
Professor J. F. A. SPRENT, Department of Parasitology, University of Queensland, St. Lucia, Brisbane 4067, Australia

Deputy Editor
Dr. K. C. BREMNER, CSIRO, Long Pocket Laboratories, Indooroopilly, Brisbane 4068, Australia

Correspondence Editor
DR. C. BRYANT, Department of Zoology, Australian National University, P.O. Box 4, Canberra 2600, Australia

Foundation Editor 1971–1974
Professor J. D. SMYTH, Department of Medical Helminthology, London School of Hygiene and Tropical Medicine, Keppel Street (Gower Street), London WC1E 7HT, U.K.

Editorial Advisory Council
Dr. L. R. G. CANNON
Dr. J. K. DINEEN
Dr. D. F. MAHONEY
Dr. H. M. D. HOYTE
Dr. M. D. RICKARD
Dr. G. F. MITCHELL
President of the Australian Society for Parasitology, *ex officio*.

Regional Representatives
Dr. MANOON BHAIBULAYA, Department of Parasitology, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok 7, Thailand 10700.
Dr. J. C. HOLMES, Department of Zoology, University of Alberta, Edmonton, Alberta, Canada.
Dr. M. HOWELL, Department of Zoology, Australian National University, P.O. Box 4, Canberra 2600, Australia.
Dr. M. D. LITTLE, School of Public Health and Tropical Medicine, Tulane University, New Orleans, LA 70112, U.S.A.
Professor M. YOKOGAWA, Department of Parasitology, School of Medicine, Chiba University, Chiba, Japan.

Assistant to the Editor-in-Chief
Miss MARY CREMIN

Publishing and Advertising Offices: Headington Hill Hall, Oxford OX3 0BW, U.K.

Subscriptions (including postage and insurance), 1988: Annual Insitutional subscription rate (1988) DM 845.00. 2 year Institutional rate (1988/89) DM 1605.50. Personal subscription rate for those whose library subscribes at the regular rate (1988) DM 167.00. Members of the Australian Society for Parasitology may order personal subscriptions at a concessional rate and details of these rates are available on request. Prices are subject to change without notice.
Subscription enquiries from customers in North America should be sent to: Pergamon Journals Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A., and for the remainder of the world to: Pergamon Journals Ltd., Headington Hill Hall, Oxford OX3 0BW, U.K.
Application forms for Membership of the Australian Society for Parasitology (subscription A$10.00) may be obtained from: Dr. M. J. Howell, Department of Zoology, A.N.U., P.O. Box 4, Canberra 2600. The Society's constitution requires that an applicant be known personally by at least one of the sponsors for membership.

Microform Subscriptions and Back Issues:
Back issues of all previously published volumes are available in the regular editions and on microfilm and microfiche. Current subscriptions are available on microfiche simultaneously with the paper edition and on microfilm on completion of the annual index at the end of the subscription year.

Copyright © 1987 Australian Society for Parasitology

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting of manuscript, the authors agree that the copyright for their article is transferred to the Australian Society for Parasitology if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organisations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the publisher on behalf of the copyright holder.
Photocopying information for users in the U.S.A. The Item-fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the United States Copyright Law, is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Center Inc., 27 Congree St., Salem, MA 01970.
Permission for other use. The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, for resale. Specific written permission must be obtained from the publisher for such copying.
The Item-fee Code for this publication is: 0020-7519/87 $3.00 + 0.00

CONTENTS OF VOLUME 17

Number 1 February 1987

PARASITOLOGY — QUO VADIT?

Proceedings of the Sixth
International Congress of Parasitology
Edited by M. J. Howell

Preface vii
The Opening Ceremony ix

PRESIDENTIAL ADDRESS

W.P. ROGERS — Advances in Parasitology: 1886–1986 — 1

STREAM 1—MOLECULES, CELLS AND PARASITES

R.J. HOWARD — Vaccination against malaria: recent advances and the problems of antigenic diversity and other parasite evasion mechanisms — 17

S.R. SMITHERS — Vaccination against schistosomes and other systemic helminths — 31

H.R.P. MILLER — Vaccination against intestinal parasites — 43

A. SHER, R. CORREA-OLIVEIRA, P. BRINDLEY and S.L. JAMES — Selection of the host for resistance: Genetic control of protective immunity to schistosomes — 53

P. MCINTYRE, R.L. COPPEL, D.B. SMITH, H.D. STAHL, L.M. CORCORAN, C.J. LANGFORD, J.M. FAVALORO, P.E. CREWTHER, G.V. BROWN, G.F. MITCHELL, R.F. ANDERS and D.J. KEMP — Expression of parasite antigens in *Escherichia coli* — 59

A.J.G. SIMPSON — The influence of molecular heterogeneity in helminth identification, protective immunity and immunodiagnosis — 69

D.P. MCMANUS — Intermediary metabolism in parasitic helminths — 79

G.H. COOMBS — Intermediary metabolism in parasitic protozoa — 97

J. BARRETT — Developmental aspects of metabolism in parasites — 105

D.F. METTRICK — Interactions between parasites and their hosts: metabolic aspects — 111

STREAM 2—PARASITES AND HUMAN HEALTH

W.E. GUTTERIDGE	New antiprotozoal agents	121
J.I. BRUCE	New anthelmintics	131
W. APT	Indications for treatment	141
J.H. CROSS	Recent advances in human protozoan parasites of the gastrointestinal tract	151
Z.S. PAWLOWSKI	Intestinal helminthiases and human health: recent advances and future needs	159
D. BUNNAG and T. HARINASUTA	The current status of drug resistance in malaria	169
P. CARNEVALE and J. MOUCHET	Prospects for malaria control	181

STREAM 3—THE PARASITE ASSEMBLAGE

M.D. MURRAY	Arthropods—the pelage of mammals as an environment	191
D.M. SPRATT	Helminth communities in small mammals in south-eastern New South Wales	197
J.C. HOLMES	The structure of helminth communities	203
P.W. PRICE	Evolution in parasite communities	209
D.C. NORTON	Plant nematode communities	215
D.L. RIDDLE	Post-embryonic development in *Caenorhabditis elegans*	223
A.F. BIRD	Moulting of parasitic nematodes	233
M.D.B. BURT	Early morphogenesis in the Platyhelminthes with special reference to egg development and development of cestode larvae	241
G.D. SCHMIDT	Morphogenesis of the Acanthocephala	255
H. MEHLHORN, A.O. HEYDORN and E. SCHEIN	Developmental processes in parasitic protozoa	259
J.R. LICHTENFELS	Phylogenetic inference from adult morphology in the Nematoda; with emphasis on the bursate nematodes, the Strongylida; advancements (1982–1985) and recommendations for further work	269
J. LLEWELLYN	Phylogenetic inference from platyhelminth life-cycle stages	281
D.R. BROOKS	Analysis of host-parasite coevolution	291

STREAM 4—PARASITISM IN AQUATIC ENVIRONMENTS

H. GRIZEL, E. BACHERE, E. MIALHE and G. TIGE	Solving parasite-related problems in cultured molluscs	301
R.M. OVERSTREET	Solving parasite-related problems in cultured crustacea	309
K. MOLNÁR	Solving parasite-related problems in cultured freshwater fish	319
I. PAPERNA	Solving parasite-related problems in cultured marine fish	327
R.A. BRAY	Patterns in the evolution of marine helminths	337
K. MACKENZIE	Parasites as indicators of host populations	345
H. MÖLLER	Pollution and parasitism in the aquatic environment	353
A.P. DOBSON and R.M. MAY	The effects of parasites on fish populations—theoretical aspects	363
C.J. SINDERMANN	Effects of parasites on fish populations: practical considerations	371
R. HINDE	Symbioses between aquatic invertebrates and algae	383
G. LAUCKNER	Ecological effects of larval trematode infestation on littoral marine invertebrate populations	391
L.P. ZANN	A review of macrosymbiosis in the coral reef ecosystems	399
J.R. GERACI and D.J. ST. AUBIN	Effects of parasites on marine mammals	407
T. OSHIMA and M. KLIKS	Effects of marine parasites on human health	415

STREAM 5—PRODUCTIVITY AND ANIMAL HEALTH—HELMINTHS

P. NANSEN	Production losses and control of helminths in ruminants of temperate regions	425
J.P. FABIYI	Production losses and control of helminths in ruminants of tropical regions	435
P.H. HOLMES	Pathophysiology of nematode infections	443
J.D. DARGIE	The impact on production and mechanisms of pathogenesis of trematode infections in cattle and sheep	453
M.A. GEMMELL	A critical approach to the concepts of control and eradication of echinococcosis/hydatidosis and taeniasis/cysticercosis	465

R.K. PRICHARD	The pharmacology of anthelmintics in livestock	473
J. BOGAN and J. ARMOUR	Anthelmintics for ruminants	483
P.J. MARTIN	Development and control of resistance to anthelmintics	493
R.B. WESCOTT	Anthelmintics for horses	503
D.E. JACOBS	Anthelmintics for dogs and cats	511
R.M. ANDERSON	The role of mathematical models in helminth population biology	519
I.A. BARGER	Population regulation in trichostrongylids of ruminants	531
G. SMITH	The regulation of trematode populations by density-dependent processes	541
D. WAKELIN	The role of the immune response in helminth population regulation	549
G.A.A. ALBERS and G.D. GRAY	Breeding for worm resistance: A perspective	559

STREAM 6—PRODUCTIVITY AND ANIMAL HEALTH—ARTHROPODS AND PROTOZOA

F.E.G. COX	Interactions in protozoan infections	569
P.R. ELLIS	Interactions between parasite and vector control, animal productivity and rural welfare	577
K.T. FRIEDHOFF	Interaction between parasite and vector	587
R.J. TATCHELL	Interactions between ticks and their hosts	597
W.O. HAUFE	Host-parasite interaction of blood-feeding dipterans in health and productivity of mammals	607
R. FAYER and J.P. DUBEY	Comparative epidemiology of Coccidia: Clues to the etiology of equine protozoal myeloencephalitis	615
M. MURRAY and J.C.M. TRAIL	Comparative epidemiology and control of trypanosomes	621
M.J. DALLWITZ, A.S. YOUNG, D.F. MAHONEY and R.W. SUTHERST	Comparative epidemiology of tick-borne diseases of cattle with emphasis on modelling	629
M. ROMMEL	Control of non-vector-borne Protozoa	639
A.D. IRVIN	Control of tick-borne diseases	649
S.E. KUNZ	Integrated pest management of dipteran pests in the New World	659

G.A. VALE	Prospects of tsetse control	665
P. WILLADSEN	Immunological approaches to the control of ticks	671
P.W. RIDDLES and J. NOLAN	Prospects for the management of arthropod resistance to pesticides	679
J.A. MILLER	New approaches to the chemical control of arthropod pests of livestock	689

PLENARY SESSION—THE FUTURE OF PARASITOLOGY

P.M. SCHANTZ	Changing patterns of parasitic disease: Old enemies and new invaders—the battle wages on	697
J.F. WILLIAMS	Prospects for prophylaxis of parasitism	711
R.W. SUTHERST	Epidemiological concepts and strategies for parasite control: what changes are likely to occur?	721
K. VICKERMAN	The impact of future research on our understanding of parasitism	731
Author Index		737
Keyword Index		739

Number 3 February 1987

	Instructions to Contributors	i
	Parasitological Calendar	743
	Parasitological Societies of the World	747
V. M. BOWLES, P. R. CARNEGIE and R. M. SANDEMAN	Immunization of sheep against infection with larvae of the blowfly *Lucilia cuprina*	753
R. M. SANDEMAN, B. J. COLLINS and P. R. CARNEGIE	A scanning electron microscope study of *L. cuprina* larvae and the development of blowfly strike in sheep	759
G. C. COLES and J. I. BRUCE	*In vitro* selection of drug resistant *Schistosoma mansoni*	767
I. DELABRE, C. GABRION, F. CONTAT, A.-F. PETAVY and S. DEBLOCK	The susceptibility of the Mongolian gerbil (*Meriones unguiculatus*) and the OF_1 mouse strain to *Echinococcus multilocularis*—ultrastructural aspects of the cysts	773
C. C. CHEN and B. R. LAURENCE	*In vitro* study on humoral encapsulation of microfilariae: establishment of technique and description of reaction	781

C. C. CHEN and B. R. LAURENCE	*In vitro* study on humoral encapsulation of microfilariae: effects of diethyldithiocarbamate and dopachrome on the reaction	789
M. D. MCCAIGUE and D. W. HALTON	Immunological damage to *Hymenolepis diminuta* following a challenge infection in C57 mice	795
G. F. VITTI, W. J. O'SULLIVAN and A. M. GERO	The biosynthesis of uridine 5'-monophosphate in *Giardia lamblia*	805
I. PAPERNA, A. H. HARTLEY and R. H. M. CROSS	Ultrastructural studies on the plasmodium of *Myxidium giardi* (Myxosporea) and its attachment to the epithelium of the urinary bladder	813
K. ROHDE	The formation of glandular secretion in larval *Austramphilina elongata* (Amphilinidea)	821
B. CHUMPITAZI, P. AMBROISE-THOMAS, M. CAGNARD and J. M. AUTHEMAN	Isolation and characterization of toxoplasma exoantigens from *in vitro* culture in MRC5 and VERO cells	829
A. L. GARDNER, S. MILLER and A. T. HAIMANOT	Determination of enzyme variants of glucose phosphate isomerase in *Plasmodium falciparum* by isoelectric focusing and polyacrylamide electrophoresis	835
J. J. WIRTH and F. KIERSZENBAUM	Inhibition of mammalian host cell infection by insect-derived, metacylic forms of *Trypanosoma cruzi* in the presence of human or rabbit anti-*T. cruzi* antibodies	841
G. L. UGLEM and O. R. LARSON	Facilitated diffusion and active transport systems for glucose in metacercariae of *Clinostomum marginatum* (Digenea)	847
L. E. SERRANO and J. A. O'DALY	Protein fraction from *Trypanosoma cruzi* infected spleen cell supernatants with immunosuppressive activity *in vitro*	851

Number 4 April 1987

	Parasitological Calendar	863
	Parasitological Societies of the World	867
W. K. KROEZE and C. E. TANNER	*Echinococcus multilocularis*: susceptibility and responses to infection in inbred mice	873
T. S. DUNN, R. E. B. HANNA and W. A. NIZAMI	Ultrastructural and histochemical observations on the epidermis, presumptive tegument and glands of the miracidium of *Gigantocotyle explanatum* (Trematoda : Paramphistomidae)	885
S. J. SPELLMAN and A. D. JOHNSON	*In vitro* excystment of the black spot trematode *Uvulifer ambloplitis* (Trematoda : Diplostomatidae)	897
A. HARRIS, D. D. HEATH, S. B. LAWRENCE and R. J. SHAW	Ultrastructure of changes at the surface during the early development phases of *Taenia ovis* cysticerci *in vitro*	903

T. PETRONIJEVIC and W. P. ROGERS	Undissociated bases as the stimulus for the development of early parasitic stages of nematodes	911
A. K. SRIVASTAVA and J. J. JAFFE	Phosphatidylinositol, phosphatidylglycerol and cardiolipin synthesis in adult *Dirofilaria immitis* females	917
R. W. SUTHERST	The dynamics of hybrid zones between tick (Acari) species	921
P. WEBER	The fine structure of the female reproductive tract of adult *Loa loa*	927
B. V. GOODGER, M. A. COMMINS, I. G. WRIGHT, D. J. WALTISBUHL and G. B. MIRRE	Successful homologous vaccination against *Babesia bovis* using a heparin-binding fraction of infected erythrocytes	935
A. A. KASIM and Y. R. AL-SHAWA	Coccidia in rabbits (*Oryctolagus cuniculus*) in Saudi Arabia	941
C. J. INCHLEY, E. M. GRIEVE and P. M. PRESTON	The proliferative response of mouse lymphoid tissues during infections with *Babesia microti* or *Babesia rodhaini*	945
C. HONG, J. F. MICHEL and M. B. LANCASTER	Observations on the dynamics of worm burdens in lambs infected daily with *Ostertagia circumcincta*	951
P. A. HOLDSWORTH	Scanning electron microscopy of viable and calcified *Onchocerca gibsoni*	957
M. BEVERLEY-BURTON, G. J. KLASSEN and R. J. G. LESTER	Generic diagnosis of *Asthenocotyle* Robinson, 1961 (Monogenea : Microbothriidae) and description of *Asthenocotyle taranakiensis* new species from *Oxynotus bruniensis* (Oxynotidae) taken in New Zealand waters	965
C. COMBES and H. MONÉ	Possible mechanisms of the decoy effect in *Schistosoma mansoni* transmission	971
I. A. BARGER and K. M. DASH	Repeatability of ovine faecal egg counts and blood packed cell volumes in *Haemonchus contortus* infections	977

Number 5 July 1987

PARASITOLOGY — QUO VADIT?

Sixth International Congress of Parasitology
Post Congress Scientific Report

Edited and Compiled by R. C. A. Thompson

Introduction	981
Plenary Session—The future of parasitology	984
Symposia	
Stream 1—Molecules, cells and parasites	985
Stream 2—Parasites and human health	987
Stream 3—The structure and evolution of parasite communities	991
Stream 4—Parasites in aquatic environments	994
Stream 5—Productivity and animal health—helminths	997
Stream 6—Productivity and animal health—protozoa	999

Workshops
Stream 1 1002
Stream 2 1014
Stream 3 1023
Stream 4 1029
Stream 5 1033
Stream 6 1039

Number 6 August 1987

Editorial 1043

Announcement 1045

Parasitological Calendar 1047

Parasitological Societies of the World 1051

P. L. BEARDSELL and M. J. HOWELL — Expression of liver fluke antigens by mouse cells 1057

S. MAS-COMA and I. MONTOLIU — The life cycle of *Dollfusinus frontalis*, a brachylaimid trematode of small mammals (Insectivora and Rodentia) 1063

P. J. SKELLY and A. J. HOWELLS — The humoral immune response of sheep to antigens from larvae of the sheep blowfly (*Lucilia cuprina*) 1081

R. I. S. AGBEDE and D. H. KEMP — Ultrastructure of secretory cells in the gut of the cattle-tick *Boophilus microplus* 1089

M. W. GREGORY and J. CATCHPOLE — Ovine coccidiosis: pathology of *Eimeria ovinoidalis* infection 1099

M. W. GREGORY, J. CATCHPOLE, R. M. PITTILO, and C. C. NORTON — Ovine coccidiosis: observations on "oocyst patches" and polyps in naturally-acquired infections 1113

E. C. ROWLAND and E. A. MASTERS — *Trypanosoma cruzi* specific antibody response in immunized C3H(He) mice during infection 1125

T. S. DUNN, R. E. B. HANNA and W. A. NIZAMI — Sensory receptors of the miracidium of *Gigantocotyle explanatum* (Trematoda: Paramphistomidae) 1131

T. S. DUNN, R. E. B. HANNA and W. A. NIZAMI — Ultrastructural and histochemical observations on the foregut and gut caeca of *Gigantocotyle explanatum*, *Gastrothylax crumenifer* and *Srivastavaia indica* (Trematoda: Paramphistomidae) 1141

T. S. DUNN, R. E. B. HANNA and W. A. NIZAMI — Ultrastructural and cytochemical observations on the tegument of three species of paramphistomes (Platyhelminthes: Digenea) from the Indian water buffalo, *Bubalus bubalis* 1153

T. S. DUNN, R. E. B. HANNA and W. A. NIZAMI — Ultrastructural and cytochemical studies on the ventral pouch of *Gastrothylax crumenifer* (Digenea: Paramphistomidae) 1163

B. CHUMPITAZI, P. KUPKA, P. AMBROISE-THOMAS, A. GROS and J. THELU — Immunological and biological characterization of *Plasmodium falciparum* exoantigens 1175

M. T. FOX, D. GERRELLI, S. R. PITT, D. E. JACOBS, I. C. HART and A. D. SIMMONDS — Endocrine effects of a single infection with *Ostertagia ostertagi* in the calf 1181

P. RAMASAMY, R. E. B. HANNA and L. T. THREADGOLD — Scanning and transmission electron microscopic studies of the surface of *Vallisia indica* (Monogenea, Polyopisthocotylea) 1187

D. I. PRITCHARD and A.CARR — The developmental antigens of *Nematospiroides dubius* 1197

Research Note

M. F. LIMA and F. KIERSZENBAUM — Lactoferrin effects on the interaction of blood forms of *Trypanosoma cruzi* with mononuclear phagocytes 1205

Number 7 — October 1987

Parasitological Calendar 1209

Parasitological Societies of the World 1213

The Bancroft-Mackerras Medal of the Australian Society for Parasitology 1219

R. D. ROBINSON, J. ANDREASSEN and C. ARME — *Hymenolepis diminuta*: ultrastructural observations on complement-mediated tegumental lysis and destrobilation of 4-day-old worms *in vitro* 1225

W. M. BOYCE, C. H. COURTNEY and P. E. LOGGINS — Resistance to experimental infection with *Fasciola hepatica* in exotic and domestic breeds of sheep 1233

A. F. BIRD and A. C. MCKAY — Adhesion of conidia of the fungus *Dilophospora alopecuri* to the cuticle of the nematode *Anguina agrostis*, the vector in annual ryegrass toxicity 1239

D. J. HENDERSON and R. E. B. HANNA — *Hymenolepis nana* (Cestoda: Cyclophyllidea): migration, growth and development in the laboratory mouse 1249

D. I. GROVE, A. WARTON, L. L. YU, C. NORTHERN and J. M. PAPADIMITRIOU — Light and electron microscopical studies of the location of *Strongyloides stercoralis* in the jejunum of the immunosuppressed dog 1257

H. F. HASSAN and G. H. COOMBS — Purine salvage by *Acanthamoeba castellanii* 1267

F. G. CLAVERIA and F. J. ETGES — Differential susceptibility of male and female *Oncomelania hupensis quadrasi* infected with *Schistosoma japonicum* 1273

G. H. PALMER, S. D. WAGHELA, A. F. BARBET, W. C. DAVIS and T. C. MCGUIRE — Characterization of a neutralization-sensitive epitope on the Am 105 surface protein of *Anaplasma marginale* 1279

M. AHMAD, W. A. NIZAMI and R. E. B. HANNA — *Gigantocotyle explanatum*: scanning electron microscopic studies on the topographical effects of certain anthelmintics *in vitro* — 1287

H. A. MOLINA and F. KIERSZENBAUM — A study of human myocardial tissue in Chagas' disease: distribution and frequency of inflammatory cell types — 1297

A. L. DEARSLY, J. NICHOLAS and R. E. SINDEN — Sexual development in *Plasmodium berghei*: the use of mitomycin C to separate infective gametocytes *in vivo* and ookinetes *in vitro* — 1307

A. A. MARCHIONDO, P. P. WEINSTEIN and J. F. MUELLER — *In vitro* and *in vivo* enzymatic dissolution of the plerocercoid body of *Spirometra mansonoides* (Cestoidea) — 1313

A. K. SRIVASTAVA, R. D. WALTER and J. J. JAFFE — Synthetic pathways of glycerophospholipids in adult *Brugia pahangi* and *Brugia patei* — 1321

M. L. RAMAIYA, V. R. KAMATH and D. M. RENAPURKAR — Long-term *in vitro* cultivation of *Plasmodium berghei* — 1329

C. A. BEHM, C. BRYANT and A. J. JONES — Studies of glucose metabolism in *Hymenolepis diminuta* using ^{13}C nuclear magnetic resonance — 1333

R. W. DOUCE, A. E. BROWN, C. KHAMBOONRUANG, P. D. WALZER and R. M. GENTA — Seroepidemiology of strongyloidiasis in a Thai village — 1343

R. W. LEID, R. F. GRANT and C. M. SUQUET — Inhibition of neutrophil aggregation by taeniaestatin, a cestode proteinase inhibitor — 1349

G. A. A. ALBERS, G. D. GRAY, L. R. PIPER, J. S. F. BARKER, L. F. LE JAMBRE and I. A. BARGER — The genetics of resistance and resilience to *Haemonchus contortus* infection in young Merino sheep — 1355

Number 8 — December 1987

Parasitological Calendar — 1365

Parasitological Societies of the World — 1369

P. C. C. GARNHAM — Obituary: Professor Augusto Corradetti 1907–1986 — 1375

W. P. ROGERS — Centenary Biographical Note: David Keilin 1887–1963 — 1377

H. S. GILL and A. R. WALKER — The salivary glands of *Hyalomma anatolicum anatolicum:* structural changes during attachment and feeding — 1381

A. R. WALKER and J. D. FLETCHER — Histology of digestion in nymphs of *Rhipicephalus appendiculatus* fed on rabbits and cattle naive and resistant to the ticks — 1393

S. K. MISRA, H. MEHDI, A. K. RASTOGI and N. K. GARG — Increase in activity and biosynthesis of phospholipase A of *Entamoeba histolytica* by cholesterol passage — 1413

E. LACEY, K. L. SNOWDON, G. K. EAGLESON and E. F. SMITH — Further investigations of the primary mechanism of benzimidazole resistance in *Haemonchus contortus* — 1421

A. MOUAHID and A. THÉRON — *Schistosoma bovis:* variability of cercarial production as related to the snail hosts: *Bulinus truncatus, B. wrighti* and *Planorbarius metidjensis* — 1431

K. S. SMITH, J. W. ALBRIGHT and J. F. ALBRIGHT — The limitation of growth of *Trypanosoma musculi in vitro* — 1435

S. D. FOLZ, R. A. PAX, E. M. THOMAS, J. L. BENNETT, B. L. LEE and G. A. CONDER — Development and validation of an *in vitro Trichostrongylus colubriformis* motility assay — 1441

A. G. CUMMINS, V. M. DUNCOMBE, T. D. BOLIN, A. E. DAVIS and J. YONG — The response of the small intestine of the protein-deficient rat to infection with *Nippostrongylus brasiliensis* — 1445

Volume Contents, Author Index and Key Word Index for Volume 17, 1987 — i